

WHAT IS CLAIMED IS:

1 1. In a process for preparing door skins and other door
2 components by the molding of sheet molding compound containing an unsaturated,
3 curable molding resin in a heated mold under pressure, the improvement comprising:

4 selecting, as a cure catalyst composition,

5 a) an effective amount of a catalyst component containing a major
6 amount, based on the amount of catalyst, of t-amylperoxybenzoate, and

7 b) an effective amount of a polymerization inhibitor composition.

1 2. The process of claim 1, wherein said catalyst component is
2 present in an amount of 0.5 to 5 parts per 100 parts of said molding resin, and said
3 inhibitor composition is present in an amount of 0.01 part to about 1 part per 100
4 parts molding resin, calculated on the basis of a 5 weight percent concentration of
5 inhibitor in said polymerization inhibitor composition.

1 3. The process of claim 2 wherein said inhibitor is p-
2 benzoquinone.

1 4. The process of claim 1, wherein said catalyst component is
2 present in an amount of 0.8 to 2.0 parts per 100 parts of said molding resin, and said
3 inhibitor is present in an amount of 0.05 part to about 0.4 parts per 100 parts
4 molding resin.

1 5. The process of claim 1 wherein the cure time is less than 60
2 seconds.

1 6. The process of claim 1 wherein the cure time is less than 50
2 seconds.

1 7. The process of claim 1 wherein a vacuum is applied upon
2 closure of the tool in which said sheet molding compound is molded.

1 8. The process of claim 7 wherein said vacuum is between 15 and
2 29 inches mercury and is released from 5 to 30 seconds after its application.

1 9. A door having a compression molded SMC door skin and
2 applied inserts or add-on panels, the improvement comprising securing said applied
3 inserts or panels to a surface of said door skin using adhesive tape as the sole
4 securing means.

1 10. The process of claim 9 wherein said add-on panels are applied
2 to said doorskin without first making a hole through said doorskin.

1 11. A process for reducing surface defects on a stainable
2 compression molded SMC doorskin without creating a non-uniformly stainable
3 surface, said process comprising:

4 a) selecting as an SMC, an SMC which exhibit a
5 cure time of one minute or less;

6 b) upon closure of a door skin mold containing said SMC,
7 applying a vacuum of from about 10 inches Hg to 29
8 inches Hg; and

9 c) maintaining said vacuum for a period of from about 5
10 seconds to about 30 seconds.

1 12. The process of claim 11 wherein said cure time is 50 seconds
2 or less.

1 13. The process of claim 11, wherein said vacuum is from about
2 15 to 29 inches Hg, and the pressure of the mold is from about 200 psig to about
3 1500 psig.

1 14. The process of claim 11, wherein the vacuum is applied for
2 from 10 to 23 seconds.

1 15. A compression molded SMC doorskin or molded part,
2 comprised of the cured reaction product of an SMC containing a cure catalyst
3 composition containing a catalyst system effective to cure said doorskin in less than
4 one minute at 150°C.

1 16. The doorskin or molded part of claim 15 wherein said SMC
2 contains an inhibitor in an amount of 0.01 part to about 2.0 part per 100 parts of a
3 curable unsaturated resin component in said SMC, and a catalyst component
4 comprising in major part t-amylperoxybenzoate.

1 17. In a fiberglass-reinforced door skin produced by compression
2 molding sheet molding compound containing from about 5 parts to about 300 parts
3 fiberglass per 100 parts of curable resin, the improvement comprising replacing up
4 to about 25 weight percent of fiberglass with wollastonite.